WHAT IS CLAIMED IS:

1. A method of identifying oligomeric compounds having bioactivity *in vivo* comprising:

contacting a bioindicative cell with one or more pairs of candidate oligomeric compounds *in vitro*, wherein the bioindicative cell is contacted with a first oligomeric compound having a sense strand orientation, and the bioindicative cell is contacted with a second oligomeric compound having an antisense strand orientation, wherein the bioindicative cell is contacted with the second oligomeric compound at least one hour after the bioindicative cell is contacted with the first oligomeric compound, and wherein at least a portion of the second oligomeric compound is capable of hybridizing with at least a portion of the first oligomeric compound; and

determining whether the bioindicative cell has an altered phenotype, wherein if the bioindicative cell has an altered phenotype, one or more of the pairs of candidate oligomeric compounds comprises *in vivo* bioactivity.

2. A method of claim 1 wherein the first and second oligomeric compounds are small interfering RNA.

3. A method of claim 1 wherein the contacting occurs in the absence of a transfection reagent.

4. A method of claim 1 wherein the bioindicative cell is a mammalian tissue-derived cell.

5. A method of claim 4 wherein the mammalian tissue-derived cell is a primary hepatocyte, primary keratinocyte, primary macrophage, primary fibroblast, primary pancreatic cell, or a stem cell.

6. A method of claim 4 wherein the mammalian tissue-derived cell is a rodent primary hepatocyte.

7. A method of claim 6 wherein the rodent is a mouse.

8. A method of claim 6 wherein the rodent is a rat.

9. A method of claim 4 wherein the mammalian tissue-derived cell is a primate primary hepatocyte.

10. A method of claim 9 wherein the primate is a Cynomolgus monkey.

11. A method of claim 9 wherein the primate is a human.

12. A method of claim 1 wherein the altered phenotype is an increase in uptake of the candidate oligomeric compounds, decrease in expression of the mRNA produced from the gene to which the candidate oligomeric compounds are targeted, or decrease in expression of the protein encoded by the gene or mRNA to which the candidate oligomeric compounds are targeted.

13. A method of claim 1 wherein the bioindicative cell is contacted with the second oligomeric compound at least two hours after the bioindicative cell is contacted with the first oligomeric compound.

14. A method of claim 1 wherein the bioindicative cell is contacted with the second oligomeric compound between two hours and four hours after the bioindicative cell is contacted with the first oligomeric compound.

15. A method of claim 1 wherein each of the first and second oligomeric compounds comprises 10 to 40 nucleotides.

16. A method of claim 1 wherein each of the first and second oligomeric compounds comprises 18 to 30 nucleotides.

17. A method of claim 1 wherein each of the first and second oligomeric compounds comprises 21 to 24 nucleotides.

18. A method of claim 1 wherein at least a portion of the second oligomeric compound is complementary to and capable of hybridizing to a selected target nucleic acid, the second oligomeric compound comprises a plurality of linked nucleosides linked by internucleoside linking groups, the first oligomeric compound comprises a plurality of linked nucleosides linked by internucleoside linking groups and wherein essentially each of the nucleosides is other than 2'-OH and have 3'-endo conformational geometry, and the first and second oligomeric compounds optionally comprise a phosphate group, a 3'-overhang, or a conjugate group.

19. A method of claim 18 wherein each of the nucleosides of the second oligomeric compound comprise a B-D-ribofuranose sugar group.

20. A method of claim 18 wherein the 3'-terminus of the second oligomeric compound comprises a stabilizing or conjugate group.

21. A method of claim 20 wherein the stabilizing group is a capping group or a dTdT dimer.

22. A method of claim 20 wherein the 3'-terminus of the second oligomeric compound comprises a conjugate group.

23. A method of claim 18 wherein the second oligomeric compound comprises a 5'-phosphate group.

24. A method of claim 18 wherein the 5'-terminus of the second oligomeric compound comprises a stabilizing or conjugate group.

25. A method of claim 24 wherein the stabilizing group is a capping group.

26. A method of claim 24 wherein the 5'-terminus of the second oligomeric compound comprises a conjugate group.

27. A method of claim 18 wherein the first oligomeric compound comprises a 5'-phosphate group.

28. A method of claim 18 wherein each of the internucleoside linking groups of the second oligomeric compound is, independently, a phosphodiester or a phosphorothioate.

29. A method of claim 28 wherein each of the internucleoside linking groups of the second oligomeric compound is a phosphodiester.

30. A method of claim 28 wherein each of the internucleoside linking groups of the second oligomeric compound is a phosphorothioate.

31. A method of claim 18 wherein each of the internucleoside linking groups of the first oligomeric compound is, independently, a phosphodiester or a phosphorothioate.

32. A method of claim 31 wherein each of the internucleoside linking groups of the first oligomeric compound is a phosphodiester.

33. A method of claim 31 wherein each of the internucleoside linking groups of the first oligomeric compound is a phosphorothioate.

34. A method of claim 18 wherein the 3'-terminus of the first oligomeric compound comprises a stabilizing or conjugate group.

35. A method of claim 34 wherein the stabilizing group is a capping group or a dTdT dimer.

36. A method of claim 34 wherein the 3'-terminus of the first oligomeric compound comprises a conjugate group.

37. A method of claim 18 wherein the 5'-terminus of the first oligomeric compound comprises a stabilizing or conjugate group.

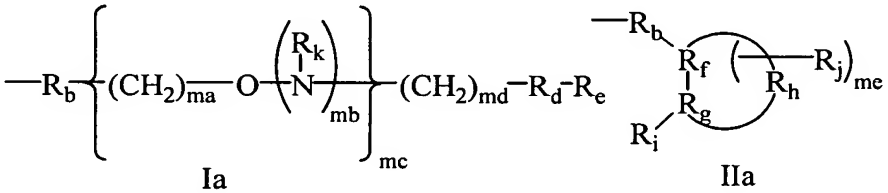
38. A method of claim 37 wherein the stabilizing group is a capping group.

39. A method of claim 37 wherein the 5'-terminus of the first oligomeric compound comprises a conjugate group.

40. A method of claim 18 wherein each of the nucleosides of the first oligomeric compound is a nucleoside having 3'-endo conformational geometry.

41. A method of claim 18 wherein each of the nucleosides having 3'-endo conformational geometry comprises a 2'-substitutuent group.

42. A method of claim 41 wherein each of the 2'-substituent groups is, independently, -F, $-O-CH_2CH_2-O-CH_3$, $-O-CH_3$, $-O-CH_2-CH=CH_2$ or a group having one of formula I_a or II_a:



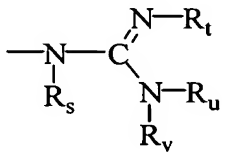
Ia IIa

wherein:

R_b is O, S or NH;

R_d is a single bond, O, S or C(=O);

R_e is C_1-C_{10} alkyl, $N(R_k)(R_m)$, $N(R_k)(R_n)$, $N=C(R_p)(R_q)$, $N=C(R_p)(R_r)$ or has formula III_a;



IIIa

R_p and R_q are each independently hydrogen or C_1-C_{10} alkyl;

R_r is $-R_x-R_y$;

each R_s, R_t, R_u and R_v is, independently, hydrogen, $C(O)R_w$, substituted or unsubstituted C_1-C_{10} alkyl, substituted or unsubstituted C_2-C_{10} alkenyl, substituted or

unsubstituted C_2-C_{10} alkynyl, alkylsulfonyl, arylsulfonyl, a chemical functional group or a conjugate group, wherein the substituent group is hydroxyl, amino, alkoxy, carboxy, benzyl, phenyl, nitro, thiol, thioalkoxy, halogen, alkyl, aryl, alkenyl, or alkynyl;

or optionally, R_u and R_v, together form a phthalimido moiety with the nitrogen atom to which they are attached;

each R_w is, independently, substituted or unsubstituted C_1-C_{10} alkyl, trifluoromethyl, cyanoethyloxy, methoxy, ethoxy, t-butoxy, allyloxy, 9-fluorenylmethoxy, 2-(trimethylsilyl)-ethoxy, 2,2,2-trichloroethoxy, benzyloxy, butyryl, iso-butyryl, phenyl or aryl;

R_k is hydrogen, a nitrogen protecting group or $-R_x-R_y$;

R_p is hydrogen, a nitrogen protecting group or $-R_x-R_y$;

R_x is a bond or a linking moiety;

R_y is a chemical functional group, a conjugate group or a solid support medium;

each R_m and R_n is, independently, H, a nitrogen protecting group, substituted or unsubstituted C_1-C_{10} alkyl, substituted or unsubstituted C_2-C_{10} alkenyl, substituted or unsubstituted C_2-C_{10} alkynyl, wherein the substituent group is hydroxyl, amino, alkoxy, carboxy, benzyl, phenyl, nitro, thiol, thioalkoxy, halogen, alkyl, aryl, alkenyl, alkynyl; NH_3^+, $N(R_u)(R_v)$, guanidino, or acyl where the acyl is an acid amide or an ester;

or R_m and R_n, together, are a nitrogen protecting group, are joined in a ring structure that optionally includes an additional heteroatom selected from N and O or are a chemical functional group;

R_i is OR_z, SR_z, or $N(R_z)_2$;

each R_z is, independently, H, C_1-C_8 alkyl, C_1-C_8 haloalkyl, $C(=NH)N(H)R_u$, $C(=O)N(H)R_u$ or $OC(=O)N(H)R_u$;

R_f, R_g and R_h comprise a ring system having from about 4 to about 7 carbon atoms or having from about 3 to about 6 carbon atoms and 1 or 2 heteroatoms wherein the heteroatoms are oxygen, nitrogen, or sulfur and wherein the ring system is aliphatic, unsaturated aliphatic, aromatic, or saturated or unsaturated heterocyclic;

R_j is alkyl or haloalkyl having 1 to about 10 carbon atoms, alkenyl having 2 to about 10 carbon atoms, alkynyl having 2 to about 10 carbon atoms, aryl having 6 to about 14 carbon atoms, $N(R_k)(R_m)$ OR_k, halo, SR_k or CN;

m_a is 1 to about 10;

each mb is, independently, 0 or 1;

mc is 0 or an integer from 1 to 10;

md is an integer from 1 to 10;
me is from 0, 1 or 2; and
provided that when mc is 0, md is greater than 1.

43. A method of claim 41 wherein each of the 2'-substituent groups is, independently, -F, $-O-CH_2CH_2-O-CH_3$, $-O-CH_3$, $-O-CH_2-CH=CH_2$ or $-O-CH_2-CH-CH_2-NH(R_j)$ where R_j is H or C_1-C_{10} alkyl.

44. A method of claim 41 wherein each of the 2'-substituent groups is, independently, -F, $-O-CH_2CH_2-O-CH_3$ or $-O-CH_3$.

45. A method of claim 44 wherein each of the 2'-substituent groups is $-O-CH_3$.

46. A method of claim 45 wherein each of the internucleoside linking groups of the second oligomeric compound is a phosphodiester.

47. A method of claim 46 wherein each of the internucleoside linking groups of the first oligomeric compound is a phosphodiester.

48. A method of claim 46 wherein each of the internucleoside linking groups of the first oligomeric compound is a phosphorothioate.

49. A method of claim 45 wherein each of the internucleoside linking groups of the second oligomeric compound is a phosphorothioate.

50. A method of claim 49 wherein each of the internucleoside linking groups of the first oligomeric compound is a phosphodiester.

51. A method of claim 49 wherein each of the internucleoside linking groups of the first oligomeric compound is a phosphorothioate.

52. A method of claim 18 wherein the first and second oligomeric compounds have 3'-dTdT overhangs.

53. A method of claim 18 wherein the first and second oligomeric compounds have blunt ends.

54. A method of claim 1 wherein at least one oligomeric compound comprises at least one terminal cap moiety.

55. A method of claim 54 wherein the terminal cap moiety is attached to one or both of the 3'-terminal and 5'-terminal ends of the at least one oligomeric compound.

56. A method of claim 55 wherein the terminal cap moiety is an inverted deoxy abasic moiety.

57. A kit comprising an assay platform, a bioindicative cell, and one or more bioactive pairs of oligomeric compounds which comprise a first oligomeric compound having a sense strand orientation and a second oligomeric compound having an antisense strand orientation, wherein at least a portion of the second oligomeric compound is capable of hybridizing with at least a portion of the first oligomeric compound.